



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

David C. CUSHING, *et al.*

Serial No. /09/699, 503

Filed: October 31, 2000

For: SYSTEM AND METHOD
FOR EXECUTING STRATEGY
SECURITY TRADING

) BEFORE THE BOARD OF
) PATENT APPEALS AND
) INTERFERENCES

) Appeal No.:

) Examiner: Steven R. Wasylchak

) Group Art Unit: 3624

APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

The following comprises the Appellants' Brief on Appeal from the final rejection, dated October 1, 2004, of claims 1-16 and 18-21. This Appeal Brief is accompanied by the required appeal fee set forth in 37 C.F.R. § 1.17(c). Appellants' Notice of Appeal was filed on February 1, 2005. Therefore, the present Appeal Brief is timely filed.

I.

REAL PARTY IN INTEREST

The real party in interest in this case is ITG Inc. of New York, N.Y.

II.

RELATED APPEALS AND INTERFERENCES

Appellants state that, upon information and belief, they are not aware of any co-pending appeal or interference which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III.

STATUS OF THE CLAIMS

Claims 1-16 and 18-21 are pending. Claim 17 has been cancelled. Claims 1-16 and 18-21 stand finally rejected. Claims 1 and 2 constitute the independent claims on appeal. This appeal is directed to claims 1-16 and 18-21.

IV.

STATUS OF AMENDMENTS

No proposed amendment subsequent to the outstanding final Office action has been filed in this application.

V.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The present invention relates generally to the field of electronic commerce and to securities trading mechanisms. In particular, the presently claimed subject matter relates to systems and methods for executing trades of securities according to predefined trading strategies.

A securities trading mechanism can be thought of as a set of protocols that translate a group of investors' latent demands into realized prices and quantities. Specification at page 1. Algorithmic trading, or so-called "program trading," has been known for many years and was done by hand. According to such program trading, various factors such as timing, volume, individual price trends, market trends, sector trends, etc. are taken into account according to a series of rules defined by the algorithm which then determine whether to enter trade orders and what parameters to select for those trade orders. Id.

Independent claim 1 defines a system for executing trades of securities according to predefined trading strategies. The system includes a plurality of servers connected to a plurality of clients over a communication network. Each server is programmed with a specific trading strategy algorithm and is configured to receive a request for trading a number of shares of a security and to execute trade orders according to the specific trading strategy algorithm. The specific trading strategy algorithm receives a request for trading a number of

shares of a particular security and generates one or more executable trade orders for carrying out the request. The executable trade orders (e.g., limit orders) are generated according to a specified trading strategy. Each client is configured to generate a request for trading a number of shares of a security and transmit the request over said communication network to a selected server of the plurality that corresponds to the selected trading strategy.

Claim 2 defines a method for executing an executable trade order for a security. The method includes a step of providing a server connected to a communication network. The server is programmed with a specific trading strategy algorithm, which receives a non-executable request for trading a number of shares of a particular security, and generates one or more executable trade orders for carrying out the request. The one or more executable trade orders are generated according to a trading strategy (e.g., VWAP, SPI, etc.). At the server, the request for trading a number of shares of a particular security is received over a network from a customer. One or more executable trade orders for carrying out the request are generated according to actions determined by the specific trading strategy algorithm. The one or more executable trade orders are executed in a trade forum (e.g., NYSE, POSIT, ECNs, etc.) according to actions determined by the specific trading strategy algorithm.

The claimed invention is illustrated through two different exemplary trading strategies: Volume Weighted Average Price (VWAP) and Short-term Price Improvement

(SPI).

Referring to Fig. 1, one or more smart servers 11 is provided on an communication network 10. The network 10 may be a public network or a private dedicated network. Each server 11 is programmed with a specific trading strategy, and has access to various trading mechanisms or exchanges through the network 10, such as the New York Stock Exchange (NYSE) 18, the POSIT® system 20, the over-the-counter (OTC) market 22 (including, but not limited to, the NASDAQ stock market), or an ECN 24. Preferably, multiple trading strategies are available on each server 11. See present specification, page 4. A number of different servers 11 can be provided on the network, with each server 11 running a different trading strategy. Id. at 4-5.

A customer may place a trade order with any specific one of the servers 11 according to the strategy that the customer wishes to use to complete the order. The appropriate server 11 receives the order from the customer over the network 10 and processes the trade according to the preset trade strategy algorithm being run by the server 11. The server 11 then executes the strategized order and preferably transmits the execution results to the customer in real time. Id. at 5.

Figs. 2A and 2B illustrate an exemplary embodiment of the invention using the VWAP trading algorithm. The VWAP trading algorithm is programmed into a server 11, and customers wishing to execute the VWAP strategy for trades input orders and transmit

them directly to the server 11 running the VWAP strategy via the network 10. Id. at 6.

At step 201, the trading day is divided into a number of equal time bins such as, for example, bins of half-hour increments. At step 202, the customer's order is received by the smart server 11 from a source such as a dedicated terminal 16. In a typical order, a customer would state a trade side (buy or sell), a security identifier (ticker symbol), number of shares and time duration of the order. For example, a VWAP order would state a wish to buy 100,000 shares of IBM common stock before the close of the market throughout the course of a given day, or specifying some other definite expiration time for the order to be executed. The VWAP server screens orders through a number of filters, such as for securities which are not part of the server's trading universe, or for orders in excess of a preset maximum number of shares. Id. at 6-7.

At step 203, the average share volume of the security in question, such as IBM common stock, for each time bin over a predetermined amount of time in the past, such as the last 21 days, is computed. This computation may reveal that 10% of IBM share volume typically has traded in the 9:30-10:00 time bin. Similar percentages are determined for each time bin. Id. at 7.

At step 204, the computed share volume numbers are subjected to smoothing relative to a standard such as the S&P 500 in order to eliminate the effect of any anomalies occurring

during the time period being analyzed, such as, for example, an unusually large volume transacting in any one day. Id.

The adjusted share volume percentage for each bin is then multiplied at step 205 by the number of shares in the customer order (in the example, 100,000 shares). This results in an unrounded distribution of shares over all of the time bins of the trading day. At step 206, the obtained share distribution is converted to a round lot (i.e., multiples of 100 shares) distribution. The share distribution thus obtained dictates how many shares must be transacted within each time bin during the trading day. Id. at 8.

Once this distribution has been obtained, there remains the question as to how the trades scheduled for each time bin will be implemented. The simplest method is to place appropriately sized market orders during each time bin. However, this method is costly, and is not available for trades involving NASDAQ equities trading on ECNs. A preferred methodology of placing orders within each time bin for the VWAP strategy is shown in Fig. 2B. Id.

Referring to Fig. 2B, at step 207, a partial amount of the bin is entered at a passive price (i.e., a price better than the market whereby the market must move to the price before execution will occur). For example, if the distribution calculation indicates that 10,000 shares should be transacted in the 9:30-10:00 time bin, 3,300 shares could be entered as a limit order at a passive price. At step 208, the algorithm waits for a predetermined amount of

time, such as five minutes. At step 209, a determination is made as to whether the order has been at least partially filled. If so, at step 210 the market is "read," by determining the ratio of bid size to ask size (where bid size is the number of shares at the current bid price, and ask size is the number of shares at the current ask price). If the market is adverse to the order, such as where bid size greatly outnumbers ask size for a buy order, then at step 212 the shares remaining in the bin are rapidly transacted by placing aggressively priced limit orders, and if still unfilled after a certain period of time, by placing market orders. If no adverse market trend is found, then another passively priced limit order is placed at step 207. Id.

If the order has not been filled, at step 213 the process waits for an additional predetermined time period, such as another five minutes. At step 214, it is again determined whether the order has been at least partially filled. If so, the process proceeds to step 210. If not, at step 215 the market is read by looking at bid/ask ratio and the spread size. If the current market trend is adverse, or the spread is very tight, as determined at step 216, then the bin is completed with market orders at step 217. If not, at step 218, the limit order is modified according to present market conditions, and is placed again at step 207. This cycle repeats until all shares for the bin are traded, or until the time period for the particular bin expires. Id. at 9.

If the time period expires with unexecuted trades remaining, all unexecuted shares for that bin are sent as market orders. Of course, in determining the expiration of the time

period, enough time has to be remaining to be able to execute the market orders. Thus, according to one embodiment of the invention, the time period is considered to have "expired" a few minutes (e.g., 2.5 minutes) before the end of the customer's specified expiration time, to allow enough time to complete the customer's order within the customer's specified expiration time. Id.

Further, an additional predetermined waiting period and order status determination step may be performed between steps 214 and 215. Id. at 10.

VI.

GROUND OF REJECTION TO BE REVIEWED ON APPEAL

This appeal presents a single issue for decision by the Board:

Whether claims 1-16 and 18-21 are unpatentable over U.S. Patent No. 6,505,174 to Keiser et al. (herein referenced as, "Keiser") in view of U.S. Patent No. 6,618,707 to Gary, further in view of articles identified as "ITG Spring 2000" (herein referenced as "ITG") and "PlexusGroup 1999."

VII.

ARGUMENT

The Rejection of Claims 1-16 and 18-21 Under 35 U.S.C. § 103(a) Is Improper

The Final Office Action, dated October 1, 2004, states that the rejection of certain claims for formal reasons is withdrawn and “prior rejections remain.” See page 2 of Office Action dated October 1, 2004.

The “prior rejections” were set forth in the Office Action dated March 1, 2004, in which claims 1-16 and 18-21 were rejected under 35 U.S.C. § 103(a) as unpatentable over Keiser in view of Gary, further in view of Plexusgroup and of ITG under 35 U.S.C. § 103(a), and are properly rejected on that basis.

For the reasons stated below, Appellants respectfully submit that the rejection of claims 1-16 and 18-21 was made in error and should be reversed.

To establish a prima facie case of obviousness, the Examiner must demonstrate: (1) a suggestion or motivation to combine reference teachings, (2) that there was a reasonable expectation of success, and (3) that prior art reference or references teach or suggest all claim limitations.¹ Motivation to combine references can come from “the nature of the problem to be solved, the teachings of the prior art, [or] knowledge of persons of ordinary skill in the

¹ In re Vaeck, 947 F.2d. 488, 493, 20 USPQ2d. 1438 (Fed. Cir. 1991), see also MPEP § 2142, at 2100-128 (Rev. 2, May 2004).

art."² The §103 rejections on appeal are improper because they fail to establish a prima facie case of obviousness in that the cited art does not disclose or suggest all elements of claims 1 and 2, upon which the remainder of the pending claims depend, and, moreover, no motivation exists to modify the cited references in the manner suggested by the Examiner.

Here, the Examiner failed to make out a prima facie case of obviousness. First, the rejection is improperly stated and is improper on its face. Second, none of the cited prior art, either singularly or in combination, describes or suggests the step or feature of receiving a request from a customer for trading a number of shares of a security and implementing that request by generating executable trade orders according to a specific trading strategy algorithm that can be executed in a trade forum, as defined by the claimed invention. Third, even if each of the references collectively taught the elements of the present claims, which they do not, there is no motivation to combine the references in such a way as to derive the present claims. Last, the Examiner uses impermissible hindsight as a basis for the rejection.

According to the claimed invention, a number of trading strategy algorithms are provided, which can be used to carry out a request for trading a number of shares according to a desired trading strategy. As discussed above, the present invention could be implemented with trading strategies such as VWAP or SPI. It is important to note that, according to the claims, the customer order is not a readily executable trade order, such as a

² In re Rouffet, 149 F.3d 1350, 1358, 47 USPQ2d 1453 (Fed. Cir. 1998).

market order or a limit order, but is rather “a request for trading a number of shares of a particular security.” See, e.g., claim 1. A plurality of servers are each programmed with one or more specific trading algorithms that are capable of generating a number of executable trade orders to carry out such a request according to the desired trading strategy. The executable trade orders could be, for example, limit orders that are executed in a trade forum, such as the New York Stock Exchange (NYSE). As described in the specification, the trade orders may be executed in a number of trade forums or may be internally traded (e.g., claim 14).

As a result, the invention provides a significant advantage over the prior art where strategies are executed manually by human traders. Therefore, much more complex trades and larger numbers of complex trades can be executed than before with ease.

The rejection of the claims was not well laid out in the Office Action dated March 1, 2004. The rejection was disjointed and unclear. The Examiner merely asserted a number of supposed teachings from each of the prior art references and stated conclusively that it would have been obvious to combine the prior art “to teach the applicant’s disclosure.” The Examiner failed to state the differences in the claims over the applied references and the proposed modifications necessary to arrive at the claimed subject matter as required by MPEP § 706.02(j). See March 3, 2004 Office Action at pages 4-5. The Examiner failed to expressly state that or describe how, the prior art teaches each element of the claims. For

example, although the Examiner asserted that Keiser teaches generating buy and sell orders, that Gary supposedly teaches orders entered by customers, and that ITG teaches an automated trading agent, the Examiner failed to assert that some combination of the prior art suggests generating executable orders based on customer requests to carry out trading a number of shares according to a desired trading strategy, as defined by the claims. That is, the rejection on its face does not state that each and every element of the claims is taught by the prior art nor how to “connect the dots” in order to derive the claimed invention. Thus, the rejection is improper on its face.

Further, the prior art fails to shows or suggests each and every feature of the claims. Keiser, in contrast to the present invention, is directed to a system for creating and maintaining a “virtual” financial market. As such, the system is different from non-virtual markets. See e.g., col. 3, line 29 (“Unlike the case with non-virtual markets, the virtual specialist . . . ”); col. 4, lines 13-15 (“Given the special circumstances of the virtual market, the system provides an artificial price control, or braking, mechanism.”); col. 4, lines 46-51 (The virtual economy may have finite amount of capital with which to close arbitrage situations that might arise if the policy of the exchange is different than what is reflected by the prices on the market. The virtual economy is unlike non-virtual economies, which may have an infinite amount of capitol.”). The system of Keiser includes a number of functions designed to reduce the volatility of the virtual market, such as an instrument pricing system

for setting the price of instruments and an instrument price control system controlling volatility. Plainly, Keiser is completely different than the present invention.

Keiser fails to disclose a system for trading securities in a trading forum, wherein the traders enter market orders, i.e., executable orders, to buy or sell certain quantities of securities at the prevailing market prices. Keiser does describe a virtual market system that can fulfill orders, that is, match executable orders in a queue generated by a customer via an interface or by the system itself. See, e.g., col. 11, lines 20-39. Keiser also describes a “virtual specialist” program that determines the price of a virtual security based on supply and demand and also generates buy and sell orders to control price. Col. 12, lines 34-67. The virtual specialist generates the buy and sell orders to offset price movement and not in response to a request for a number of shares from a customer, as set forth in claims 1 and 2 of the present invention. The virtual specialist does not, in response to such a customer request, generate and execute trade orders according to a specific trading strategy, as set forth in claims 1 and 2 of the present invention. See col. 9, ll. 14-34; col. 11, ll. 20-39; and col. 15, ll. 25-51 of Keiser. Thus, Keiser is deficient in at least failing to suggest or disclose the above-features.

Gary merely discloses an automated exchange for matching previously entered orders. See col. 4, lines 55-60. Gary describes a feature wherein large block orders may be broken down into smaller pieces. Orders can be professional orders, “FARMM” orders from

market makers, or public orders. Col. 7, lines 9-15. All orders are executable and are previously set up (e.g., market orders, limit orders, etc.) There is no discussion or suggestion in Gary of generating executable orders based on customer requests to carry out trading a number of shares according to a desired trading strategy. Consequently, Gary cannot cure the deficiencies of Keiser and no combination of Gary with Keiser could result in a system or method as set forth in independent claims 1 and 2.

PlexusGroup merely describes a known trading algorithm, VWAP. Appellants have not claimed to have invented VWAP. Accordingly, Appellants submit that the PlexusGroup reference fails to cure the above-described deficiencies in the prior art and is irrelevant to the claimed invention.

The ITG article generally describes the Assignees "SPI SmartServer," but does not specifically describe a system as disclosed and claimed in the present application wherein a number of executable trade orders can be generated from customer request for trading a number of shares of a particular security, to carry out such a request according to the desired trading strategy.

Further, the ITG Article describes subject matter invented by one or more of the named inventors in the present application, and therefore does not constitute statutory prior art. See July 1, 2004 Response, at 10. Additionally, the ITG Article itself at page 3 contains a Copyright date of 2004. Thus, the Examiner has failed to establish that this article was

available to the public prior to the October 31, 2000 filing date of the present application let alone the January 19, 2000 priority date. The words "ITG Connect Spring 2000" in the upper left hand corner of page 1 of the Article do not establish any date of publication of the Article. For the foregoing reasons, it is submitted that the ITG Article cannot be applied against the claims of the present application. Even if applied, the ITG Article fails to cure the above-described deficiencies in the prior art.

In addition to the foregoing, each of the dependent claims (3-16 and 18-21) recites features in addition to the above which are not shown nor suggested by any combination of the cited prior art. For example, claim 3 recites the additional feature wherein the requests for trading the number of shares of a particular security requests the trade of a quantity of shares of the security over a portion of a market day for the trade forum, and the actions determined by the specific trading algorithm further include the steps of dividing a trading day into a plurality of time bins, computing, for received requests, the average share volume for each time bin over a predetermined period of time and determining share volume percentages for each time bin, multiplying the number of shares requested by the percentages for each time bin to determine the number of shares to be allocated within each time bin, and generating executable orders for the allocated numbers of shares within each time bin in accordance with the specific trading strategy hour. See claim 3. Kieser nor Gary disclose or suggest such steps. PlexusGroup discloses generally that VWAP exists, however, does not

disclose or suggest such steps either. ITG states that a "VWAP SmartServer" uses a sophisticated model to target volume weighted average price with a high degree of accuracy over any time period. However, ITG fails to specifically recite or suggest any of the claim steps recited by claim 3 (upon which claims 4-8 depend) of the present invention.

Similarly, claim 9 (upon which claims 10-12 depend) recites the steps of continuously monitoring during the time period a plurality of market indicators related to the security, and repeatedly generating during the time period one or more appropriate signals which dictate actions to be taken at the trade forum, the signals being based upon the market indicators, and the signals causing an action at the trade forum selected from the group consisting of a market order, a limit order having a price selected from one of a plurality of level of aggressiveness, and a cancellation of an existing order and a delay of entering a new order. The signals are sent until the time period expires or until an order is executed by the trade forum. None of the cited prior art discloses or suggests such features.

Similarly, claim 14 recites the steps of providing a plurality servers connected to a communication network and to each other over the network. The servers are capable of comparing the received requests with orders received by other servers of the plurality of servers, and are capable of carrying out trades with the other servers in accordance with the order information entered into the server. None of the cited prior art shows or suggests such an arrangement.

Similarly, claim 18 upon which claim 19 depends, recites the feature of a central server coupled with the plurality of servers and the plurality of clients. The central server is configured to receive the non-executable trade orders and route the non-executable trade order to the selected server based on the selected trading technology. None of the cited prior art discloses or suggests such a feature.

Consequently, no combination of the PlexusGroup Article or the ITG Article with either Keiser or Gary or any purported combination of Keiser and Gary could result in the claimed system or method defined in claims 1-16 and 18-21 of the present application.

Additionally, even if such a combination were possible, there would be no motivation to modify the device of Keiser with the other references as proposed by the Examiner.

"When a rejection depends on a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references."³ Virtually all inventions are combinations of old elements.⁴ If identification of each claimed element in the prior art were sufficient to negate patentability, the Examiner could use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention.⁵ To prevent the use of hindsight based on the teachings of the patent

³ Rouffet, 47 USPQ2d at 1453; see also MPEP § 2143.01.

⁴ See Rouffet, 47 USPQ2d at 1457.

⁵ See id.

application, the Examiner must show a motivation to combine the references in the manner suggested.⁶

In Rouffet, the Court of Appeals held that although all elements recited in the claims of Rouffet's application were arguably disclosed in the applied prior art references, the rejection under 35 U.S.C. § 103 was improper because there was no suggestion as to why one skilled in the art would have been motivated to combine the references in such a manner as to render the claims obvious.⁷

The situation is, at best, the same in this case. Even if all elements recited in the present claims can be found in the combined disclosures, there is no reason that one of ordinary skill in the art would have been motivated to combine these references in such a manner as to render the pending claims obvious.

The virtual specialist of Keiser is concerned with maintaining a virtual market and not implementing trades for a customer. The stated motivation to combine the prior art cited in the Office Action was “to teach a computer implemented securities trading system with algorithmic functions and which can improve liquidity and which utilizes” VWAP or SPI. See March 3, 2004 Office Action at pages 4-5. However, the Office Action failed to specifically describe how to modify Keiser with Gary to derive the claim invention. There is

⁶ See id. at 1457-58.

⁷ See id. at 1457.

no suggestion in Gary or any of the other references that would teach someone to modify the virtual specialist of Keiser to generate executable trade orders from a customer request to be executed in a trading forum according to a trade strategy as defined by the present claims. The virtual specialist is concerned with maintaining the virtual market and is completely unconcerned with implementing customer requests, except to the extent that it handles fulfillment of buy and sell orders (i.e., matching the two to effect trades).

Finally, any motivation claimed by the Examiner comes from improper hindsight. The Examiner's purported rationale is merely a broad, conclusory statement unsupported by any evidence. A broad conclusory statement regarding the teaching of multiple references, standing alone, is not evidence.⁸ Moreover, combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability, the essence of hindsight.⁹ Clearly, the cited prior art references do not suggest the claimed invention, and there is no sufficient basis for combining the references but for the teachings of the present invention. Thus, the proposed modification is no more than a hindsight reliance on the teachings in the present application of the advantages of the present invention.

⁸ See McElmurry v. Arkansas Power & Light Co., 995 F.2d 1576, 1578, 27 USPQ2d (BNA) 1129, 1131 (Fed. Cir. 1993); In re Sichert, 566 F.2d 1154, 1164, 196 USPQ (BNA) 209, 217 (CCPA 1977).

⁹ See, e.g., Rouffet, 149 F.3d at 1357.

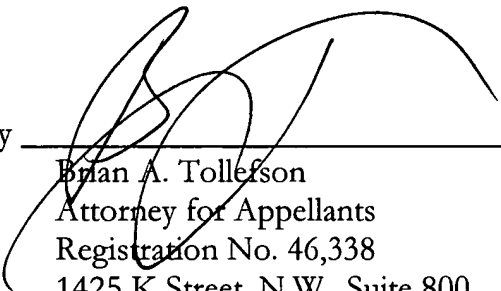
Accordingly, the for the foregoing reasons, the rejection of each of claims 1-16 and 18-21 is improper and should be reversed.

Please charge any fee or credit any overpayment pursuant to 37 CFR 1.16 or 1.17 to Deposit Account No. 02-2135.

Respectfully submitted,

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VIII.

APPENDIX OF CLAIMS ON APPEAL

1. A system for executing trades of securities according to predefined trading strategies, comprising:

a plurality of servers, each server being programmed with a specific trading strategy algorithm and configured to receive a request for trading a number of shares of a security and execute trade orders according to said specific trading strategy algorithm, said specific trading strategy algorithm receiving a request for trading a number of shares of a particular security, and generating one or more executable trade orders to be executed in a trade forum for carrying out said request, said one or more executable trade orders being generated according to a trading strategy;

said plurality of servers being connected to a plurality of clients over a communication network, each client being configured to generate a request for trading a number of shares of a security and transmit said non-executable trade order over said communication network to a selected server of said plurality corresponding to a selected trading strategy.

2. A method for executing an executable trade order for a security, comprising the steps of:

providing a server connected to a communication network, said server being programmed with a specific trading strategy algorithm, said specific trading strategy algorithm receiving a non-executable request for trading a number of shares of a particular security in a trade forum, and generating one or more executable trade orders for carrying out said request, said one or more executable trade orders being generated according to a trading strategy;

receiving at said server over said network a request for trading a number of shares of a particular security from a customer;

generating one or more executable trade orders for carrying out said request according to actions determined by said specific trading strategy algorithm; and

executing the one or more executable trade orders in a trade forum according to actions determined by said specific trading strategy algorithm.

3. The method of claim 2, wherein said request for trading a number of shares of a particular security requests a trade of a quantity of shares of the security over a portion of a market day for said trade forum, and said actions determined by said specific trading strategy algorithm comprises the steps of:

dividing a trading day into a plurality of time bins;

for a received request, computing average share volume for each time bin over a predetermined period of time and determining share volume percentages for each time bin; multiplying the number of shares requested by the percentages for each time bin to determine the number of shares to be allocated within each time bin; and generating executable orders for said allocated numbers of shares within each time bin in accordance with said specific trading strategy algorithm.

4. The method of claim 3, wherein a trade of an allocated number of shares within a given time bin is executed by entering at least one limit order during said given time bin, with a price and time for each limit order being determined as a function of an amount of time remaining in said given time bin, and as a function of real-time assessment of current market conditions based on real-time market data.

5. The method of claim 4, further comprising the steps of periodically checking the status of outstanding orders; and changing at least one of the pricing and the number of shares of an outstanding order as a function of an amount of time remaining in said given time bin, and as a function of real-time assessment of current market conditions based on real-time market data.

6. The method of claim 3, further comprising the steps of:

identifying securities for which said server has received a request on both a buy side and a sell side; and

internally transferring shares of such identified securities from a seller to a buyer at a price determined according to the conditions specified in said request for said identified securities.

7. The method of claim 3, wherein said executable orders are executed as limit orders for at least partial amounts of said allocated numbers of shares within each bin, the method further comprising the steps of:

determining after a predetermined period of time whether said limit orders have been at least partially filled;

if said limit orders have been at least partially filled, determining whether adverse market conditions exist, and changing the remaining share orders to more aggressive limit orders or market orders for immediate execution if adverse conditions exist;

otherwise, entering additional limit orders for partial amounts of said allocated numbers of shares within said time bins.

8. The method of claim 7, further comprising the steps of:

determining whether adverse market conditions exist if said limit orders have not been at least partially filled after a predetermined period of time;

completing the share orders within said time bins by placing more aggressive limit orders or market orders if adverse market conditions exist;

otherwise, modifying said partial limit orders within said time bins and placing said modified limit orders within said time bins.

9. The method of claim 2, wherein said request for trading a number of shares of a particular security requests a trade of a quantity of shares of the security within a time period, and said actions determined by said specific trading strategy algorithm comprises the steps of:

continuously monitoring during said time period a plurality of market indicators related to said security; and

repeatedly generating during said time period one or more appropriate signals which dictate actions to be taken at said trade forum, said signals being based upon said market indicators, and signals causing an action at said trade forum selected from the group consisting of a market order, a limit order having a price selected from one of a plurality of levels of aggressiveness, and a cancellation of an existing order and a delay of entering a new order;

wherein said signals are sent until said time period expires or until an order is executed by said trade forum.

10. The method of claim 9, wherein a signal causing a market order is sent three minutes prior to expiration of said time period.

11. The method of claim 9, wherein said selected price level of aggressiveness is determined based upon said market indicators according to a predetermined criteria.

12. The method of claim 9, wherein said monitoring of said indicators is performed automatically by said server using information provided by an electronic real-time information provider.

13. The system of claim 1, wherein said plurality of servers are also connected to each other over said network, such that said servers are capable of comparing their received requests with orders received by other servers of said plurality of servers, and are capable of carrying out trades with said other servers in accordance with the order information entered into each server.

14. The method of claim 2, further comprising the step of providing a plurality of servers connected to said communication network and to each other over said network, such that said servers are capable of comparing their received requests with orders received by other servers of said plurality of servers, and are capable of carrying out trades with said other servers in accordance with the order information entered into each server.

15. The method of claim 3, further comprising the step of smoothing said determined share volume percentages according to a predetermined algorithm.

16. The method of claim 3, wherein said trading strategy algorithm continuously monitors a plurality of market indicators related to said security, and said monitoring of said indicators is performed automatically by said server using information provided by an electronic real-time information provider.

18. The system as recited in claim 1, further comprising a central server coupled with said plurality of servers and with said plurality of clients, said central server configured to receive said non-executable trade orders and route said non-executable trade orders to said selected server based on said selected trading strategy.

19. The system as recited in claim 18, wherein said central server is programmed with a trading strategy algorithm corresponding to said selected trading strategy.

20. The system as recited in claim 1, wherein at least one server of said plurality of servers is programmed with a specific trading strategy algorithm that implements a Short-term Price Improvement (SPI) trading strategy, wherein shares are traded with a specified time period at prices based on at least one predetermined market indicator.

21. The system as recited in claim 1, wherein at least one server of said plurality of servers is programmed with a specific trading strategy algorithm that implements a Volume Weighted Adjusted Price (VWAP) trading strategy, wherein shares are traded at a price determined according to a security's VWAP over a predetermined time period.

IX.

EVIDENCE APPENDIX

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X.

RELATED PROCEEDINGS INDEX

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